adult American Goldfinches captured at two inland New Jersey sites were analyzed and compared with data from the literature. Males in both data sets were significantly heavier and had longer wings than females. Goldfinches examined in this study did not completely follow the general pattern of beginning migration in a fat condition and arriving with little or no fat; although the fat condition of spring and fall birds fits the hypothesis, August birds were at variance. Whether or not the birds processed were actually migrants or the result of local movements from breeding areas to an over-wintering area is not clear.

Literature cited

Baldwin, S.P., and S.C. Kendeigh. 1958. Variations in the weight of birds. *Auk* 55:416-467.

Bull, John. Birds of the New York area, 1964, Harper and Row, New York.

Clench, M.H., and R.C. Leberman. 1978. Weights of 151 species of Pennsylvania birds analyzed by month, age and sex. Bull. Carnegie Mus. Nat. Hist., No. 5.

Dwight, J. Jr., M.D. 1902. Individual, seasonal and geographical changes of the American Goldfinch *(Astragalinus tristis)*. *Auk* 19:149-164.

Graber, R.R., and J.W. 1962. Weight characteristics of birds killed in nocturnal migration. *Wilson Bull.* 74: 74-88.

Helms, C.W., and W.H. Drury, Jr. 1960. Winter and migratory weight and fat field studies on some North American buntings. *Bird-Banding* 31:1-40.

Prescott, K.W. 1978. Weight, fat class and wing measurements of living Dark-eyed Juncos *(Junco hyemalis)*. *Inland Bird Banding News* 50:163-183.

Ridgeway, R. 1901. The birds of North and Middle America. U.S. Natl. Mus. Bull, No. 50, Part 1:109-111.

Stewart, P.A., and R.W. Skinner. 1967. Weights of birds from Alabama and North Carolina. *Wilson Bull.* 79: 37-42.

Wetherbee, Mrs. K.B. 1934. Measurements and weights of live birds. *Bird-Banding* 5:55-64.

Wetmore, A. 1936. The number of contour feathers in Passeriform and related birds. *Auk* 53:159-169.

Wiseman, A.J. 1975. Changes in body weight of American Goldfinches. *Wilson Bull.* 87:390-411.

Whittle, C.L., and H.G. 1926. Some bird weights. *Northeastern Bird-Banding J.* 2:33-36.

Department of Art, University of Texas, Austin, Texas 78712

Age determination of female American Goldfinches

Robert P. Yunick

The usual sources of information on age and sex determination of passerines, such as the *Bird Banding Manual* (1976, U.S. Fish and Wildlife Service) and M. Wood's *A Bird-Bander's Guide to* Determining Age and Sex of Selected Species (1969, The Pennsylvania State University, University Park), do not offer reliable plumage criteria for determining the age of female American Goldfinches *(Carduelis tristis)* beyond the pre-basic molt. However, a technique described by L. Svensson (1975, *Identification Guide to European Passerines*, Naturhistoriska Riksmuseet, Stockholm) for the closely related European Goldfinch *(Carduelis carduelis)* appears to apply to male and female American Goldfinches.

Svensson illustrates for many species how the relatively pointed shape of the outer two rectrices separates the hatching-year/second-year (HY/SY) individuals from the after-hatching-year/after-second-year (AHY/ASY) individuals whose outer two rectrices are more rounded. In the American Goldfinch, the males are easily segregated by their darker flight plumage and the bright yellow lesser coverts of the AHY/ASY group and the greenish-brown lesser coverts of the HY/SY group. Using these covert differences to separate these two male age groups, one can learn to recognize the pointed rectrix shape of the HY/SY group and the rounded shape of the AHY/ASY group, and apply this distinction in shape to females following the pre-basic molt.

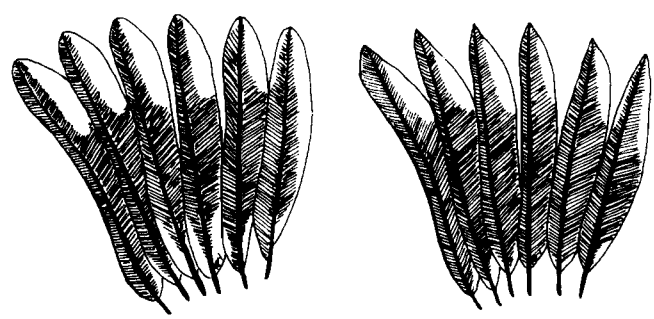

Figure 1. Left: Rectrix shape of AHY/ASY American Goldfinch after pre-basic molt. Right: Rectrix shape of HY/SY American Goldfinch after pre-basic molt. Both drawings from March specimens.

The differences in the rectrix shape for the two age groups of American Goldfinches are shown in Figure 1. I found rectrices two through five to be the most helpful for determining this difference in shape. In addition to this difference, the more pointed HY/SY rectrices tend to show greater wear at the edges in winter and spring because they are two to three months older than the same plumage of the AHY/ASY group.

This technique should be attempted only on dry rectrices which have not been disarranged through capture or holding. To insure uniformity of shape, I have found it sometimes helpful to gently smooth the dry feathers through my thumb and forefinger.

1527 Myron Street, Schenectady, NY 12309